

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-23 (Cancelled).

24. (New) A method for stimulating hair growth comprising administering to a subject in a therapeutically effective amount of a composition comprising:
- (i) a polynucleotide comprising
 - (a) a nucleic acid sequence as shown in SEQ ID NO: 1 or 3,
 - (b) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4,
 - (c) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4 having a modified signal peptide, a modified N-terminus and/or a modified C-terminus, or
 - (d) a nucleic acid sequence which hybridises under stringent conditions to any one of (a) to (c);
 - (ii) a polypeptide encoded by the nucleic acid as defined in any one of (a) to (c); or
 - (iii) a compound which binds to an antibody which specifically recognizes the polypeptide defined in (ii) or which specifically binds to an IL-15 receptor alpha chain.
25. (New) The method of claim 24, wherein said composition further comprises a second hair growth stimulating agent.
26. (New) The method of claim 25, wherein said second hair growth stimulating agent is selected from the group consisting of a zinc salt of a carboxylic acid, a saponin, a triterpene, crataegolic acid, celastrol, Asiatic acid, an inhibitor of 5-[alpha]-reductase, a 1,4-methyl-4-azasteroid, an androgen receptor antagonist, cyclosporin, triiodothyronine, diazoxide, a potassium channel opener, a derivative of oestrogen; and mixtures thereof.

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27. (New) The method of claim 26, wherein the second hair growth stimulating agent is a triterpene and is at least one of oleanolic acid and ursolic acid.

28. (New) The method of claim 26, wherein the second hair growth stimulating agent is an inhibitor of 5-[alpha]-reductase which is progesterone.

29. (New) The method of claim 26, wherein the second hair growth stimulating agent is a 1,4-methyl-4-azasteroid which is 17-[beta]-N,N-diethylcarbamoyl-4-methyl-4-aza-5-[alpha]-androstan-3-one.

30. (New) The method of claim 26, wherein the second hair growth stimulating agent is an androgen receptor antagonists which is one or more of cyproterone acetate, MINOXIDIL®, azaelaic acid and derivatives thereof.

31. (New) The method of claim 26, wherein the second hair growth stimulating agent is a potassium channel opener which is one or more of cromakalin, phenytoin, and mixtures thereof.

32. (New) The method of claim 26, wherein the second hair growth stimulating agent is a derivative of oestrogen which is oestradiolvalerate.

33. (New) The method of claim 24, wherein said composition further comprises a pharmaceutically or cosmetically acceptable carrier.

34. (New) The method of claim 24, wherein said composition is a pharmaceutical composition.

35. (New) The method of claim 24, wherein said composition is a cosmetic composition.

36. (New) The method of claim 24, wherein said composition is formulated as a hair tonic, a hair restorer composition, a shampoo, a powder, a jelly, a hair rinse, an ointment, a hair lotion, a paste, a hair cream, a hair spray and/or a hair aerosol.

37. (New) The method of claim 24, wherein said composition is administered topically to the skin or scalp of a subject.
38. (New) The method of claim 37, wherein said subject is a mammal.
39. (New) The method of claim 38, wherein said mammal is a human, a dog, a cat, a horse, a rabbit, a sheep, a camel, a mouse, a rat, an alpaca, a vicuna, a guanaco or a lama.
40. (New) The method of claim 37, wherein said subject suffers from genetically determined and/or acquired form of hair loss.
41. (New) The method of claim 40, wherein said genetically determined or acquired form of hair loss is alopecia areata, alopecia subtotalis, alopecia totalis, trichotillomania or drug induced alopecia.
42. (New) A method for treating, preventing and/or ameliorating hair loss comprising administering to a subject in a therapeutically effective amount of a composition comprising:
- (i) a polynucleotide comprising
 - (a) a nucleic acid sequence as shown in SEQ ID NO: 1 or 3,
 - (b) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4,
 - (c) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4 having a modified signal peptide, a modified N-terminus and/or a modified C-terminus, or
 - (d) a nucleic acid sequence which hybridises under stringent conditions to any one of (a) to (c);
 - (ii) a polypeptide encoded by the nucleic acid as defined in any one of (a) to (c); or

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(iii) a compound which binds to an antibody which specifically recognizes the polypeptide defined in (ii) or which specifically binds to an IL-15 receptor alpha chain.

43. (New) The method of claim 42, wherein said composition further comprises a second hair growth stimulating agent.

44. (New) The method of claim 43, wherein said second hair growth stimulating agent is selected from the group consisting of a zinc salt of a carboxylic acid, a saponin, a triterpene, crataegolic acid, celastrol, Asiatic acid, an inhibitor of 5-[alpha]-reductase, a 1,4-methyl-4-azasteroid, an androgen receptor antagonist, cyclosporin, triiodothyronine, diazoxide, a potassium channel opener, a derivative of oestrogen; and mixtures thereof.

45. (New) The method of claim 44, wherein the second hair growth stimulating agent is a triterpene and is at least one of oleanolic acid and ursolic acid.

46. (New) The method of claim 44, wherein the second hair growth stimulating agent is an inhibitor of 5-[alpha]-reductase which is progesterone.

47. (New) The method of claim 44, wherein the second hair growth stimulating agent is a 1,4-methyl-4-azasteroid which is 17-[beta]-N,N-diethylcarbamoyl-4-methyl-4-aza-5-[alpha]-androstan-3-one.

48. (New) The method of claim 44, wherein the second hair growth stimulating agent is an androgen receptor antagonists which is one or more of cyproterone acetate, MINOXIDIL®, azaelaic acid and derivatives thereof.

49. (New) The method of claim 44, wherein the second hair growth stimulating agent is a potassium channel opener which is one or more of cromakalin, phenytoin, and mixtures thereof.

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50. (New) The method of claim 44, wherein the second hair growth stimulating agent is a derivative of oestrogen which is oestradiolvalerate.

51. (New) The method of claim 44, wherein said composition further comprises a pharmaceutically or cosmetically acceptable carrier.

52. (New) The method of claim 44, wherein said composition is a pharmaceutical composition.

53. (New) The method of claim 44, wherein said composition is a cosmetic composition.

54. (New) The method of claim 44, wherein said composition is formulated as a hair tonic, a hair restorer composition, a shampoo, a powder, a jelly, a hair rinse, an ointment, a hair lotion, a paste, a hair cream, a hair spray and/or a hair aerosol.

55. (New) The method of claim 44, wherein said composition is administered topically to the skin or scalp of a subject.

56. (New) The method of claim 55, wherein said subject is a mammal.

57. (New) The method of claim 56 wherein said mammal is a human, a dog, a cat, a horse, a rabbit, a sheep, a camel, a mouse, a rat, an alpaca, a vicuna, a guanaco or a lama.

58. (New) The method of claim 55, wherein said subject suffers from genetically determined and/or acquired form of hair loss.

59. (New) The method of claim 58, wherein said genetically determined or acquired form of hair loss is alopecia areata, alopecia subtotalis, alopecia totalis, trichotillomania or drug induced alopecia.

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60. (New) A transgenic non-human animal comprising a nucleic acid comprising
- (a) a nucleic acid sequence as shown in SEQ ID NO: 1 or 3,
 - (b) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4,
 - (c) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4 having a modified signal peptide, a modified N-terminus and/or a modified C-terminus, or
 - (d) a nucleic acid sequence which hybridises under stringent conditions to any one of (a) to (c);

wherein said nucleic acid is specifically expressed in the keratinocytes of the hair bulb, in the Langerhans cells, in the melanocytes, in the dendritic epidermal T-cells, in the mast cells, in cutaneous nerve fibres or in fibroblasts.

61. (New) The transgenic non-human animal of claim 60, wherein said animal is a dog, a cat, a horse, a rabbit, a sheep, a camel, a mouse, a rat, an alpaca, a vicuna, a guanaco or a lama.

62. (New) A method for stimulating hair growth in a non-human animal comprising:

- (i) transforming said animal with a nucleic acid comprising
 - (a) a nucleic acid sequence as shown in SEQ ID NO: 1 or 3,
 - (b) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4,
 - (c) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4 having a modified signal peptide, a modified N-terminus and/or a modified C-terminus, or
 - (d) a nucleic acid sequence which hybridises under stringent conditions to any one of (a) to (c);
- (ii) expressing the polypeptide encoded by said nucleic acid.

63. (New) The method of claim 62, wherein said IL-15 polypeptide is expressed under the control of a regulatory element.

64. (New) The method of claim 63, wherein said regulatory element enables specific expression in the keratinocytes of the hair bulb, in the Langerhans cells, in the melanocytes, in the dendritic epidermal T-cells, in the mast cells, in cutaneous nerve fibres or in fibroblasts.

65. (New) The method of claim 62, wherein said animal is a dog, a cat, a horse, a rabbit, a sheep, a camel, a mouse, a rat, an alpaca, a vicuna, a guanaco or a lama.

66. (New) A method for manufacturing non-human animal hair comprising:

- (i) transforming said non-human animal with a nucleic acid comprising
 - (a) a nucleic acid sequence as shown in SEQ ID NO: 1 or 3,
 - (b) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4,
 - (c) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4 having a modified signal peptide, a modified N-terminus and/or a modified C-terminus, or
 - (d) a nucleic acid sequence which hybridises under stringent conditions to any one of (a) to (c);

and

- (ii) expressing the polypeptide encoded by said nucleic acid.

67. (New) The method of claim 66, wherein said IL-15 polypeptide is expressed under the control of a regulatory element.

68. (New) The method of claim 67, wherein said regulatory element enables specific expression in the keratinocytes of the hair bulb, in the Langerhans cells, in the melanocytes, in the dendritic epidermal T-cells, in the mast cells, in cutaneous nerve fibres or in fibroblasts.

69. (New) The method of claim 67, wherein said animal is a dog, a cat, a horse, a rabbit, a sheep, a camel, a mouse, a rat, an alpaca, a vicuna, a guanaco or a lama.

70. (New) The method of claim 67, further comprising administering to the skin and/or scalp of a non-human animal a composition comprising

- (i) a polynucleotide comprising
 - (a) a nucleic acid sequence as shown in SEQ ID NO: 1 or 3,
 - (b) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4,
 - (c) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4 having a modified signal peptide, a modified N-terminus and/or a modified C-terminus, or
 - (d) a nucleic acid sequence which hybridises under stringent conditions to any one of (a) to (c);
- (ii) a polypeptide encoded by the nucleic acid as defined in any one of (a) to (c); or
- (iii) a compound which binds to an antibody which specifically recognizes the polypeptide defined in (ii) or which specifically binds to an IL-15 receptor alpha chain.

71. (New) The method of claim 67, further comprising obtaining the hair of said non-human animal.

72. (New) A method for manufacturing non-human animal hair comprising administering to the skin and/or scalp of a non-human animal the composition

- (i) a polynucleotide comprising
 - (a) a nucleic acid sequence as shown in SEQ ID NO: 1 or 3,
 - (b) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4,
 - (c) a nucleic acid sequence encoding an amino acid sequence as shown in SEQ ID NO: 2 or 4 having a modified signal peptide, a modified N-terminus and/or a modified C-terminus, or
 - (d) a nucleic acid sequence which hybridises under stringent conditions to any one of (a) to (c);

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(ii) a polypeptide encoded by the nucleic acid as defined in any one of (a) to (c); or

(iii) a compound which binds to an antibody which specifically recognizes the polypeptide defined in (ii) or which specifically binds to an IL-15 receptor alpha chain.

73. (New) The method of claim 72, further comprising obtaining the hair of said non-human animal.

74. (New) The method of claim 72, wherein said animal is a dog, a cat, a horse, a rabbit, a sheep, a camel, a mouse, a rat, an alpaca, a vicuna, a guanaco or a lama.